**United States Department of the Interior**
**Bureau of Land Management**

Arizona Strip Field Office

Environmental Assessment (EA)

Temple Trail Allotment and Hurricane Rim Allotment Grazing Permit Renewal

---

EA-AZ-110-2005-0017

## I. INTRODUCTION

This Environmental Assessment (EA) analyzes the proposed grazing permit renewal for the Temple Trail and Hurricane Rim allotments. The action culminates an evaluation conducted on the allotments under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs). In addition, this EA looks at the present Allotment Management Plans (AMPs), and determines if current grazing management practices would maintain desirable conditions and continue to allow improvement of public land resources, or if changes in grazing management for the Temple Trail and Hurricane Rim allotments are necessary. This EA is intended to evaluate the findings of the Temple Trail and Hurricane Rim assessments as they relate to vegetation conditions and resource values in the allotments. This is done in an effort to balance demands placed on the resources by various authorized uses within the allotments.

Analysis of existing allotment data indicates that ecological condition trends and pace-frequency trends are static or improving. It was determined by the Interdisciplinary Assessment Team (IAT) during the assessment process, that resource conditions on the allotments are meeting Standards for Rangeland Health.

### Purpose and Need

The purpose and need of this action is to renew the grazing permit associated with the Temple Trail (#5216) and Hurricane Rim (#5214) Grazing Allotments located in Mohave County, Arizona approximately 40 miles South of Hurricane, Utah. The allotments are accessed via Temple Road #1015 off State Highway-59.

### Conformance with Land Use Plan

This proposal is found to be in conformance with the Arizona Strip District Resource Management Plan (RMP) dated January 1992, as amended April 1997. The RMP adopted resource specific activity plans from the Vermillion Grazing EIS (April, 1979), including allotment management plans. The Vermillion Grazing EIS proposed that the Temple Trail and Hurricane Rim allotments should continue to be managed under the implemented grazing

system.

**Relationships to Statutes, Regulations, or other Plans**

This action is in conformance with Arizona's Standards and Guides, which were developed through a collaborative process involving the Arizona Resource Advisory Council and the Bureau of Land Management State Standards and Guidelines team. The Secretary of the Interior approved the Standards and Guidelines in April 1997. The Decision Record, signed by the BLM Arizona State Director (April 1997) provided for full implementation of the Standards and Guides in all Arizona BLM Land Use Plans.

Grazing permit renewals are also provided for in 43 CFRs 4100 where the objectives of regulations are"....to promote healthy, sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; to promote the orderly use,....; to establish efficient and effective administration of grazing of public rangelands;....", and as provided for in the Land Use Plans in accordance with multiple-use objectives, requirements and provisions of established laws, regulations and BLM policies incorporating Desired Plant Community (DPC) objectives using the Ecological Site Index approach.

Grazing management practices of the Temple Trail and Hurricane Rim AMP are in conformance with Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. These practices are intended to assist management in meeting the Standards for Rangeland Health.

Renewal of the Temple Trail and Hurricane Rim grazing permit conforms to the President's National Energy Policy and would not have adverse energy impacts. This action would not deny energy projects, withdraw lands, close roads or in any other way deny or limit access to mineral materials to support energy actions.

**Issues raised relating to Standards for Rangeland Health**

The issues relating to rangeland health were identified by the Rangeland Resources Team (RRT), Interdisciplinary Assessment Team (IAT), and livestock permittee during the Temple Trail and Hurricane Rim allotments scoping meeting on January 29, 2002, and a field visit on June 19, 2002. Conclusions to these issues can be found in the Temple Trail and Hurricane Rim Standards and Guidelines Assessment Report. The issues identified through the process described above were:

a. Woody species buildup
b. High utilization patterns in the South Pasture/south end of the middle pasture
c. Knapweed / Scotch thistle control

**Issues not relating to Standards for Rangeland Health**

**a**. **Are the existing fences wildlife passable**

BLM and Arizona Game and Fish Department have conducted an inventory of all fences in pronghorn habitat, to determine if they meet BLM fence specifications. Most all of the Fences do comply on these allotments. A project crew has been dispatched to do maintenance on areas not yet in compliance, which might include a couple of areas on these allotments.

**b**. **Fick cactus, exists on rim**

The cactus occurs mostly in section 35. The population is very scattered. In 1987 five cactus were noted. In 2001 seven cactus were found. 2001 was a good flowering year for the cactus and it enabled more to be found. The trend appears stable. This population was discovered in the early 1980s. The population has always been small and scattered.

**c. Insufficient water to maintain grazing system**

On dry years this has been a problem. A pipeline from the white pockets storage tank to the Hurricane Rim South Pasture is planned and would provide water where necessary to maintain the grazing system.

**d. Antelope Knoll Catchment has too much demand**

A proposed pipeline to the South Hurricane Rim Pasture would allow more water here to keep on the grazing system during the season-of-use period. This would allow better utilization from the catchment. Another storage tank and apron would help to increase the water supply, thereby reducing the demand on the Antelope Knoll catchment. Also maintenance to keep troughs and valves from leaking and running over is necessary.

**Current Planning Process**

The Arizona Strip Field Office is currently involved in a planning process that will result in 3 stand alone RMPs, one for each new National Monument and one for the Public Domain on the Strip outside of the monuments. No grazing changes are currently anticipated for the Temple Trail and Hurricane Rim allotments. However, there may be modifications as a result of the new RMPs. The 10- year grazing permit, in part, states "This permit is subject to (A) modification, suspension or cancellation as required by land plans and applicable law; (B) annual review and to modification of terms and conditions as appropriate; …". BLM may use these permit conditions to implement any changes required under the new RMPs.

## II. PROPOSED ACTION AND ALTERNATIVES

**Proposed Action (Renewal of 10 Year Grazing Permit)**

The Proposed Action is to renew the grazing permit for the Temple Trail and Hurricane Rim allotments and associated grazing AMP for a period of ten years with current terms and conditions. Renewal of the 10 year grazing permit proposes no change from the present grazing permit. Livestock numbers would be limited to the current active preference. Livestock grazing would be in accordance with the existing AMP. New range improvements to assist in grazing practices and promote rangeland health would be considered through the NEPA process.

**Alternatives Considered But Rejected For Further Analysis**

Alternatives are tiered to the Arizona Strip District RMP (January, 1992) and the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are basically the same for this action. The Grazing EIS addressed six alternatives: Full Stocking with Management, Stocking Level by Condition Class, No Vegetation Manipulation, Elimination of Grazing on Public Lands, Less Intensive Management of Livestock Grazing and No Action.

The following three alternatives were considered for this EA but rejected because they were analyzed in the grazing Environmental Statement and RMP, to which this document is tiered.

- **Full Stocking with Management alternative** would allow stocking at the estimated livestock carrying capacity of each allotment but otherwise would provide the same management as the proposed action for these allotments, which is intensive management as two of 40 allotments and less intensive management on 10 other allotments.

- **Stocking Level by Condition Class alternative** would set the stocking level based on the average condition and apparent trend of these allotments.

- **No Grazing Alternative (Elimination of Livestock Grazing on Public Lands).** The decision to authorize livestock grazing in this area, and specifically on the Temple Trail and Hurricane Rim allotments are documented in the approved land use plan. The absence of new information or other land use plan decisions showing that continued livestock grazing would preclude BLM from meeting or making significant progress toward achieving land health standards renders the existing land use plan authorizing grazing valid. A no grazing alternative or not renewing a grazing permit would not conform to the land use plan. A plan amendment would be required before closing an allotment to livestock grazing.

**The grazing system as identified in the Temple Trail Allotment AMP (1982) and the grazing system for Hurricane Rim AMP(1983) as shown below is yearlong.**

The current grazing is operated under a deferred-rotation system. In addition to both of these allotments, there is private and state leased pastures which are used in the grazing rotation. These pastures are generally used in the spring and summer or during transition.

**Temple Trail Allotment**

**Grazing Preference and Current Use on this Allotment:**

| Livestock Numbers | Season of Use | % Federal | Active AUMs |
|---|---|---|---|
| 210 Cattle | 3/01 to 02/28 | 94% | 2370 |
| 5 Horse | 3/01 to 02/28 | 94% | 56 |
| | | Total | 2426 |

Voluntary non-use has varied from 146 to 742 AUMs per year since 1992. Non-use reflects seasonally dry periods, drought years or other factors.

**Hurricane Rim Allotment**

**Grazing Preference and Current Use on this Allotment:**

| Livestock Numbers | Season of Use | % Federal | Active AUMs |
|---|---|---|---|
| 92 Cattle | 03/01 to 02/28 | 90% | 992 |

Voluntary non-use has varied from 2 to 450 AUMs per year since 1992. Non-use reflects seasonally dry periods, drought years or other factors.

**Terms and Conditions of Grazing Permit**

Grazing would be in accordance with the Temple Trail AMP, signed September 29, 1982 and Hurricane Rim AMP, signed September 30, 1983. Billing for grazing use would be based on the actual use report which is due on or before March 15 for Temple Trail and Hurricane Rim Allotments each year. Livestock can be moved 15 days before or after scheduled move dates. When two pastures are scheduled for use at the same time, they can be grazed jointly or separately.

**Desired Plant Community (DPC)**

This EA also incorporates by reference the "Implementation of Standards for Rangeland Health and Guidelines for Grazing Administration, Temple Trail and Hurricane Rim Allotment S&G Assessment" (2002)[1]. The Temple Trail and Hurricane Rim Allotments Assessment lists and evaluates achievement of the allotment DPC objectives summarized below. These objectives are expressed in species composition by weight.

**Temple Trail**

[1]Temple Trail and Hurricane Rim Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

**Desired Plant Community Objectives developed during this process**

Desired Plant Community(DPC) Key Area#1 (Gyp Upland 7-11" pz)

- Maintain the shrub/browse composition between 20-40% through 2030
- Maintain the grass composition between 40-65% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#2 (Loamy Upland 10-14" pz)

- Maintain the shrub/browse composition between 20-55% through 2030
- Maintain the grass composition between 40-65% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#3 (Loamy Upland 10-14" pz)

- Maintain the shrub/browse composition between 20-55% through 2030
- Maintain the grass composition between 40-65% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#4 (Gyp Upland 7-11" pz)

- Maintain the shrub/browse composition between 20-35% through 2030
- Maintain the grass composition between 50-70% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#5 (Shallow Loamy 10-14" pz)

- Maintain the shrub/browse composition between 20-35% through 2030
- Maintain the grass composition between 55-75% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#6 (Clay Upland 10-14" pz)

- Maintain the shrub/browse composition between 40-70% through 2030
- Maintain the grass composition between 20-50% through 2030
- Maintain the forb composition between 1-10% through 2030

## Hurricane Rim

**Desired Plant Community Objectives developed during this process**

Desired Plant Community(DPC) Key Area#1 (Shallow Loamy 7-11" pz)

- Maintain the shrub/browse composition between 20-40% through 2030
- Maintain the grass composition between 50-70% through 2030
- Maintain the forb composition between 1-10% through 2030

Desired Plant Community(DPC) Key Area#2 (Shallow Loamy 7-11" pz)

- Maintain the shrub/browse composition between 20-40% through 2030
- Maintain the grass composition between 50-70% through 2030
- Maintain the forb composition between 1-10% through 2030

**Monitoring**

The goals of monitoring are to determine if the fundamentals or conditions of Rangeland Health are being met within the AMP area under 43 CFR 4180. These conditions of Rangeland Health are:

> (a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and land form and maintain or improve water-quality, water quantity, and timing and duration of flow.
>
> (b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
>
> (c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
>
> (d) Habitats are, or are making significant progress toward being restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

To monitor rangeland health conditions, key areas as defined in the *Monitoring* "Planning for Monitoring", "TR 4400-1", (1984) would be used. The key area would be used as an indicator area to reflect what is happening on the area they represent, as a result of on-the-ground management. Each key area would be established based on a Range Site/Ecological Site (developed by the Natural Resource Conservation Service, (NRCS)) with a specific Potential Natural Community (PNC) and specific physical site characteristics. Knowing the PNC of the area, and using the ecological site descriptions as a guide, DPC objectives can be developed. The DPC then becomes the objectives by which management actions would be measured.

Dry Weight Ranking (DWR) studies would be used to measure attainment of the key area DPC objectives. In addition, Pace Frequency studies would be used at each key area to detect changes of individual species which determines a trend or change in vegetation composition. Pace Frequency and DWR would be completed on each key area every 3-6 years. DWR and Pace Frequency study methodologies are described in *Sampling Vegetation Attributes*, "Interagency Technical Reference 1734-4" (1996).

Livestock use on forage plants would be determined by conducting grazing utilization studies using the Grazed-Class Method as described in the *Utilization Studies and Residual Measurements* "Interagency Technical Reference 1734-3" (1996). Utilization studies would be completed annually by BLM, when livestock are removed from the pasture. Study data would be compiled each year. Other information to be collected and compiled is precipitation, actual use, etc. All monitoring data would be used to evaluate current management and assist BLM in making management decisions that helps achieve vegetation objectives on the allotment.

Based on analyses of the allotments monitoring data and supporting documentation contained in the Temple Trail and Hurricane Rim S&G Assessment Report (2002), resource conditions on the allotments meet all applicable standards for rangeland health.

## III. AFFECTED ENVIRONMENT

The following critical elements of the human environment are not affected by the proposed action or alternatives or are not present on these allotments:

- Air Quality
- Area of Critical Environmental Concern (ACEC)
- Native American Religious Concerns
- Wastes (hazardous or solid)
- Water (quality and quantity of surface/underground supplies)
- Prime or unique farmlands
- Floodplains
- Environmental Justice
- Wetlands/Riparian Areas
- Wild & Scenic Rivers
- Wilderness
- Minerals
- Wild Horse and Burros

The affected environment is tiered to the Arizona Strip District RMP (January 31, 1992), Affected Environment pages III-1 to III-58, and pages 41 to 92 of the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are essentially the same for this action. Chapter 2 of the Vermillion Grazing EIS describes the environmental components likely to be impacted by the proposed action. Environmental components discussed in the EIS that might affect or be affected by the proposal are: Climate, Vegetation, Water Sources, Threatened and Endangered Plant & Animal Species, BLM Sensitive and State Species of Concern, Wildlife, Soils, Lithology, Cultural Resources, Visual Resources, Livestock Grazing and Recreation.

This EA also incorporates by reference the "Implementation of Standards for Rangeland Health and Guidelines for Grazing Administration, Temple Trail and Hurricane Rim Allotment S&G

Assessment" (2002)[2]. The Temple Trail and Hurricane Rim Allotments S&G Assessment (pages 1 to 13) describes the resources and issues applicable to the allotment area. See the Temple Trail and Hurricane Rim Allotments S&G Assessment Appendix for other resource data and associated information.

**Climate**

The Temple Trail and Hurricane Rim Allotments are in the 10.29" ppt. zone and most represented by the Temple Trail rain gauge. Approximately 14%(1.47")comes in the fall, 25%(2.54") comes in the winter, 21%(2.11") comes in the spring and 40%(4.18") comes in the summer.

**Vegetation**

There are two principal vegetative types[3] within the allotments: Grassland and desert shrub.

- The grassland type consists of plant species such as blue grama, galleta, sand dropseed, squirrel tail, needle 'n' thread and Indian ricegrass.
- The desert shrub vegetative type consists of fourwing saltbush, winterfat, shadscale, ephedra, wolfberry, sagebrush and annual species.

These vegetative types make up the different ecological sites[4] that are part of the Major Land Resource Units, as defined by the NRCS. The six dominant ecological sites on the Temple Trail and Hurricane Rim allotment are: Gypsum Upland, Shallow Loamy, Loamy Upland, Gypsum Hills, Cinder Hills and Clay Loam Upland.

**Water Sources**

The Temple Trail and Hurricane Rim allotments contain:

4 unfenced reservoirs
3 fenced reservoirs
3 combination of livestock and wildlife water catchments.

---

[2] Temple Trail and Hurricane Rim Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

[3] Vermillion Grazing Environmental Impact Statement

[4] An ecological site is a distinctive kind of land that differs from other kinds in its ability to produce a characteristic plant community. Each ecological site is a product of all environmental factors responsible for its development. Each site is capable of producing and supporting a plant community typified by an association of species that differs from other ecological sites in species kind, proportion and total production.

1 pipeline approximately 4-miles long, from private water rights off of the allotments to separate drinkers on federal lands, all within the Hurricane Rim allotment.

All of the above artificial water sources are available to wildlife, although some of the reservoirs may not actually hold water yearlong. All of the water rights are held by the permittees. There are currently no known competition for water between wildlife and livestock at the artificial sources.

**Threatened and Endangered (T&E) Species**

**Hurricane Rim Allotment**

There are no areas considered to be habitat or potential habitat for any listed threatened or endangered species on this allotment. However, bald eagle (*Haliaeetus leucocephalus*), California condor (*Gymnogyps californianus*), and peregrine falcon (*Falco peregrius alatum*) may occasionally fly over the area. An experimental non-essential population (as defined under section 10J of the Endangered Species Act) of California condors was established on the Vermillion Cliffs in 1996. These birds may eventually forage on carrion within the allotment but have not yet been observed doing so.

**Temple Trail Allotment**

Bald eagle (*Haliaeetus leucocephalus*), California condor (*Gymnogyps californianus*), and peregrine falcon (*Falco peregrius alatum*) may occasionally fly over the area. An experimental non-essential population (as defined under section 10J of the Endangered Species Act) of California condors was established on the Vermillion Cliffs in 1996. These birds may eventually forage on carrion within the allotment but have not yet been observed doing so.

**BLM Sensitive and State Species of Concern**

Temple Trail Allotment has a small population of "Fick" cactus *(Pediocactus peeblesianus var. fickienseniae)* and it is quite scattered in section 35. In 1987 five cactus were noted. In 1993 only one was re-located. In 2001 seven cactus were found in section 35. In 2004, five small grouping of the "fick" were found in the West ¼ of section 26 on the middle bench, part way down the rim. 2001 was a good flowering year for the cactus and it enabled more to be found. The trend appears stable. The population has always been small and scattered.

The surveys on the cactus have been ongoing by our area Ecologist/Botanist whom has determined the numbers remained the same and that no mortality by livestock has occurred. Fick grows in areas quite barren of vegetation. Therefore, these areas receive none to slight use by livestock because the forage is not available.

Ferruginous hawks (*Buteo regalis*) are known to forage over grassland habitat similar to that found on the allotment, though specific sightings have not been recorded for the area. Black-

crowned night Heron (*Nysticorax nycticorax hoactli*) and snowy egrets (*Egretta thula brewsteri*) have occasionally been observed using stock tanks in the area, but have not been recorded on the Temple Trail and Hurricane Rim Allotments. A variety of sensitive bat species have been captured on neighboring allotments including Townsend's big-eared (*Corynorhinus townsendii*), spotted bats (*Euderma maculatum*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), and big free-tailed bats (*Nyctinomops macrotis*).

No other, federally listed T&E species, are known to occur in the area covered by this EA.

**Wildlife**

The Clayhole Valley provides habitat for a herd of 400 pronghorn antelope (*Antilocapra Americana*), though these allotments are on the periphery of the pronghorn range. There is also limited habitat for mule deer (*Odocoileus hemionus)*, particularly in low hills and in the areas along canyon rims. Total numbers of mule deer in the area generally range from 125 to 175 with the majority of animals occupying summer range to the north in Utah and south towards Mt. Trumbull.

Mule Deer: The number of mule deer counted in this area varied considerably over the 13 year period from 1989 to 2001, from a low of 31 in 1992 to a high of 170 in 2001. While there are no published estimates of mule deer numbers specifically for the Temple Trail or Hurricane Rim Allotments, the deer herd in GMU 13A is probably less than 2,000 animals. This herd has been stable to increasing over the 13 year period from 1989 - 2001. It should be noted that the number of mule deer counted may not accurately reflect population trends due to variations and other inherent biases in survey techniques. In addition, population numbers do not necessarily reflect habitat conditions. Populations may be high despite poor habitat conditions, or low despite excellent conditions.

Mule deer fawn production estimates are generally not available. However, AGFD researchers confirmed successful reproduction for 11 of 16 (69%) telemeter does in the spring of 2001. Accounting for twins, this would result in a production estimate of 1.4 fawns/doe, or 140 fawns per 100 doe. Fawn survival rates are typically considerably lower due to over-winter mortality. A typical five year average would be about 44 fawns per 100 does

Cover becomes important to mule deer during the winter, although it is less important in areas such as the Arizona Strip where winters are mild with minimal snowfall. Optimal cover proportions for the region include 55 percent for foraging, 20 percent for hiding cover, 10 percent for thermal cover, 10 percent for fawn-rearing cover, and 5 percent for fawning habitat.

Non-game wildlife found on the allotments is typical of the area, including a variety of small mammals, grassland birds, raptors, and reptiles. All water sources within this arid area are important for wildlife.

Pronghorn: Pronghorn on these allotments are from the western portion of the Clayhole herd. Clayhole Valley is home to a herd of approximately 400 pronghorn antelope (*Antilocapra americana*). There are no estimates of pronghorn numbers available specifically for either allotment. Pronghorn and all big game species populations are monitored annually by the Arizona Game and Fish Department. Population survey data, counts, and estimates of total population are available from the department

Over the past 15 years the ratio of bucks to 100 does exceeded 25 every year. The number of fawns per 100 does has varied from 10 to over 50, but has generally been above 30. Fawn survival has been more variable, but is likely tied to climatic conditions such as precipitation and temperature.

In 1996, AGFD completed a statewide evaluation of pronghorn habitat in Arizona. Summer range sagebrush steppe pronghorn habitat is rated using seven factors: availability of water, with two miles or less distance between waters being best; vegetative ground cover, with 5-20 percent shrubs and 10-30 forbs being optimum; vegetative height, with optimum considered 10-20 inches; vegetative succulence, with optimum when forbs are green all summer; fences, with optimum being no fences and 3-strand barbed wire fences rated 90% of optimum; and slope, with 0-5 percent grades considered optimum for pronghorn habitat.

The northern 40 percent of the Temple Trail Allotment and the entire Hurricane Rim Allotment were mapped as moderate quality habitat for pronghorn. The remaining portions of the Temple Trail Allotment were mapped as either low or poor quality habitat. None of the habitat in either allotment was mapped as high quality

**Soil**

SCS Soil Survey of Mohave County Area 625(SCS,1991), Arizona, East of Hurricane Cliffs, 1992.

10 Clayhole loam, 1 to 3 percent slopes, (alluvial fans), gyp-shale; Gypsum Upland, 7" to 11" ppt
14 Grieta loam, 1 to 5 percent slopes, (fan terraces), sandstone; Loamy Upland, 7" to 11" ppt
15 Gypsiorthids-Gypsiorthids, shallow complex, 1 to 50 percent slopes, (fan terraces, hills), gypsiferous shales; Gypsiorthids=Gypsum Upland, 7" to 11" ppt; Gypsiorthids shallow=Gypsum Hills, 7" to 11" ppt
17 Havasupai-Mellenthin complex, 2 to 12 percent slopes, (fan terraces, hills), limestone; Shallow Loamy, 10" to 14" ppt
20 Jocity silty clay loam, 1 to 4 percent slopes, (stream terraces), mixed alluvium; Silty Upland, 7" to 11" ppt
23 Kinan-Hatknoll-Grieta complex, 1 to 5 percent slopes, (fan terraces), limestone, basalt, sandstone; Kinan and Grieta=Loamy Upland, 7" to 11" ppt; Hatknoll=Clay Loam Upland, 7" to 11" ppt

24 Kinan-Pennell complex, 1 to 20 percent slopes, (fan terraces, hills), limestone; Kinan=Loamy Upland, 7" to 11" ppt; Pennell=Shallow Loamy, 7" to 11" ppt
29 Manikan silty clay loam, 1 to 4 percent slopes, (stream terraces), sandstone, shale; Clayey Upland, 10" to 14" ppt
33 Mellenthin very gravelly loam, 1 to 25 percent slopes, (hills), limestone; Shallow Loamy, 10" to 14" ppt
39 Milok gravelly loam, 1 to 15 percent slopes, (fan terraces), limestone; Loamy Upland, 10" to 14" ppt
47 Torriorthents, 3 to 50 percent slopes, (scarps, hills), gyp-shales and mudstones; Gypsum Hills, 7" to 11" ppt
49 Poley-Moab complex, 1 to 10 percent slopes, (fan terraces), basalt, pyroclastics; Poley=Clay Loam Upland, 10" to 14" ppt; Moab=Loamy Upland, 10" to 14" ppt
54 Saido-Brinkerhoff complex, 1 to 5 percent slopes, (fan terraces), gyp-shale, mudstone, sandstone; Saido=Gypsum Upland, 7" to 11" ppt; Brinkerhoff+Loamy Upland, 7" to 11" ppt
63 Torriorthents-RO complex, 30 to 70 percent slopes, (hills, scarps), Moenkopi colluvium; Breaks, 10" to 14" ppt
64 Torriorthents-RO complex, dry, 30 to 70 percent slopes, (hills, scarps), Moenkopi colluvium; Breaks, 7" to 11" ppt
66 Whiskey silt loam, 1 to 4 percent slopes, (stream terraces) mixed alluvium; Loamy Upland, 14" to 18" ppt
67 Wukoki-Lomaki complex, 15 to 50 percent slopes, (cinder cones), scoriaceous basalt, pyroclastics; Cinder Hills, 10" to 14" ppt
72 Yumtheska very gravelly loam, 4 to 20 percent slopes, (hills), limestone; Shallow Loamy (PJ-Woodland), 14" to 18" ppt

**Lithology**

The allotments consist of alluvial fans, low hills, and ridges with outcrops of Moenkopi mudstones and gypsiferous shales and some Kaibab limestone. There are few silty and clayey soils on the stream terraces. Several basalt flows and related cinder cones are in the Temple Trail and Hurricane Rim Allotments

**Cultural/Historical**

Prehistoric and Historical sites may exist throughout these allotments. Cultural resources cover the span of human occupation in the new world from around 10,000 years ago, up to and including the ranch operators of today. Our specific knowledge of the cultural makeup is limited due to the lack of scientific investigation of the area. Previous Class II or III intensive inventories have occurred, with no sites recorded.

**Visual Resources**

The Visual Resource Management Class (VRMC) areas inside these allotments remain

essentially unchanged since the objectives are proposed in the Visual Resource Area Implementation Plan (VRAIP). A review and protection of the Visual resource values is a routine part of the interdisciplinary NEPA process along with recommendations for mitigating measures if impacts to the visual are anticipated when surface disturbing projects are proposed.

**Livestock Grazing**

**Temple Trail Allotment**

The Temple Trail Allotment #5216 is comprised of 21,812 acres of federal land, 235 acres of private land and 1,240 acres of state land. The total number of active AUMs on the allotment is 2,424.

**Hurricane Rim Allotment**

The Hurricane Rim Allotment #5214 is comprised of 9,475 acres of federal land, and 920 acres of state land. The total number of active AUMs on the allotment is 994.

**Recreation Resources**

The Temple Trail and Hurricane Rim allotments are considered to have recreation values for their geology, scenic view sheds, remoteness and solitude. General recreation activities include: recreational OHV use, sight seeing, driving for pleasure, horseback riding, hiking, backpacking, camping, hunting, photography, rock collecting, bird watching and nature study.

**Noxious Weeds**

There are two types of noxious weeds inside the allotments boundary. Scotch Thistle occurs in two small patches and Russian Knapweed occurs near water.

There is presently a small amount of Russian knapweed at Smith Tank and Foremaster Tank (approximately 20 scattered plants within 1 acre). Control efforts in the past 5 years have made significant progress in controlling these species.

A plan is in effect to treat it during the growing season and using periodic checks to monitor and control as long as needed until eradicated.

**Socio/Economic**

The economic base of the Arizona Strip is mainly ranching with a few gypsum/selenite mines and uranium operations. Nearby communities are supported by tourism (including outdoor recreation), construction and light industry. The social aspect involves remote, unpopulated settings with moderate opportunities for solitude.

## IV. ENVIRONMENTAL IMPACTS

Only impacts that may result from implementing the proposed action or alternatives are described in this EA. If an ecological component is not discussed, it is because BLM resource specialists have considered effects to the component and found the proposed action or alternatives would have minimal or no effects.

General effects from projects similar to the proposed action or alternatives are also described in the documents to which this EA is tiered.

This EA incorporates by reference the Temple Trail and Hurricane Rim Allotments S&G Assessment and Appendix (2002) that provide a complete discussion, analysis and summaries of the range resources and associated data and issues.

### Climate

The Proposed Action would have no effect on the climate. However, the Proposed Action would allow affected resources to respond to the climate with improvement to these resources, as mentioned below in the drought and vegetation sections.

### Drought

In response to drought conditions, BLM can modify the terms and conditions of a grazing permit (ie. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittee. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect the resources.

### Vegetation

Grazing impacts on vegetation are mitigated by timing of use, adjusting of stocking rates, and conformance with Standards and Guidelines for Grazing Management. Under current management the grazing system is designed to allow for different seasons of use and rest, allowing cool and warm season grasses and browse to elongate the plants apical bud, build vigor and achieve seed ripe. The allotments major vegetation components could be divided into two broad types. The vegetation becomes a more shrub dominated plant community with mid and short grasses and forbs. In other areas the vegetation consists mainly of mid and short grasses with some desert shrubs and forbs.

For a complete analysis and discussion of these issues refer to the Temple Trail and Hurricane Rim Allotments S&G Assessment.

Trend data for the **Temple Trail Allotment**, vegetation components indicate that key areas 1, 2,

3, & 5 are in an upward trend and key areas 4 & 6 are in static trend as a result of current management and precipitation. These vegetation components constitute the ecological sites upon which DPC objectives are based. Key areas are established on ecological sites and studied to determine the ecological status[5] of that site and the trend of plant species on the site.

Table 1 lists pastures and key area, the ecological site of the key area, current ecological status and associated similarity indexes. Also, listed is the current trend of the vegetation based on pace-frequency study data.

**Table 1**

| Pasture | Key Area | Ecological Site | Ecological Status | Similarity Index | Frequency Trend |
|---|---|---|---|---|---|
| Temple Trail North | #1 | Gyp Upland 7-11" pz | Late Seral | 51% | Up |
| Temple Trail Middle | #2 | Loamy Upland 10-14 pz | Late Seral | 59% | Up |
| Temple Trail South | #3 | Clay Loam Upland 10-14" pz | Late Seral | 57% | Up |
| Temple Trail North | #4 | Gyp Upland 7-11" pz | Late Seral | 56% | Static |

[5]Ecological status is the present state of vegetation of an ecological site in relation to the potential plant community for that site. It expresses the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural plant community for the site. Ecological status is a coefficient of community similarity that gives an ecological rating of the plant community. Ecological status is also defined in seral stages, which are the developmental stages of ecological succession. The four ecological status classes correspond to percent similarity to potential natural community and correlate with seral stage ratings.

Early Seral Stage (0-25%)
Mid Seral Stage (26-50%
Late Seral Stage (51-75%)
Potential Natural Community (76-100%)

| | | | | | |
|---|---|---|---|---|---|
| Temple Trail Middle | #5 | Gyp Upland 10-14" pz | Late Seral | 64% | Up |
| Temple Trail South | #6 | Clay Bottoms 10-14" pz | Mid Seral | 43% | Static |

Trend data for the **Hurricane Rim Allotment**, vegetation components indicate that key areas 1 & 2 are static trend and DPC is Late Seral Stages as a result of current management and precipitation. These vegetation components constitute the ecological sites upon which DPC objectives are based. Key areas are established on ecological sites and studied to determine the ecological status[6] of that site and the trend of plant species on the site.

Table 1 lists pastures and key area, the ecological site of the key area, current ecological status and associated similarity indexes. Also, listed is the current trend of the vegetation based on pace-frequency study data.

Table 1

| Pasture | Key Area | Ecological Site | Ecological Status | Similarity Index | Frequency Trend |
|---|---|---|---|---|---|
| Hurricane Rim South | #1 | Shallow Loamy 7-11" pz | Late Seral | 58% | Static |
| Hurricane Rim North | #2 | Shallow Loamy 7-11" pz | Late Seral | 56% | Static |

[6]Ecological status is the present state of vegetation of an ecological site in relation to the potential plant community for that site. It expresses the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural plant community for the site. Ecological status is a coefficient of community similarity that gives an ecological rating of the plant community. Ecological status is also defined in seral stages, which are the developmental stages of ecological succession. The four ecological status classes correspond to percent similarity to potential natural community and correlate with seral stage ratings.

Early Seral Stage (0-25%)
Mid Seral Stage (26-50%
Late Seral Stage (51-75%)
Potential Natural Community (76-100%)

**Utilization**

Utilization[7] data from 1983-2002 has been compiled for this evaluation. Utilization levels during the analysis period have been below the 50 percent allowable level.

Utilization is the proportion or degree of current year's forage production that is consumed or removed by animals. The Key Species Grazed Class Method was used to collect the data. Utilization was read at the key areas.

**Temple Trail**

Utilization levels during the analysis period have averaged below the 50% allowable level for grasses and slightly above for browse. During the evaluation period, average utilization across all pastures for Cool Season grasses was 41%, ranging between 10% and 70%. For the Warm Season grasses, the average was 34%, ranging from 13% to 60%. Browse averaged 64% and all browse species ranged from 37% to 90%.

**Hurricane Rim**

Utilization levels during the analysis period has averaged below the 50% allowable level for grasses and slightly above for browse. During the evaluation period, average utilization across all pastures for Cool Season grasses was 39%, ranging between 18% and 70%. For the Warm Season grasses, the average was 27%, ranging from 13% to 45%. Browse averaged 58% and all browse species ranged from 32% to 80%.

The Temple Trail and Hurricane Rim Allotments have been managed under an AMP. Current grazing is operated under a deferred-rotation system. Dependable forage and water conditions exist.

**Threatened and Endangered (T&E) Species**

The Proposed Action Alternative would not impact any listed threatened or endangered species nor would the proposed action impact an occasional fly over by the bald eagle, California condor, peregrine falcon or any other species that may visit.

**BLM Sensitive and State Species of Concern**.

The "Fick" cactus *(Pediocactus peeblesianus var. fickienseniae)* is quite scattered in section 26 & 35. In 1987 five cactus were noted. In 1993 only one was re-located. In 2001 seven cactus

---

[7]Utilization is the portion or degree by weight of current years forage production that is consumed or destroyed by animals (including insects). Utilization is synonymous with use.

were found in section 35. 2001 was a good flowering year for the cactus and it enabled more to be found. The trend appears stable. The population has always been small and scattered. In 2004, five small groupings of this cactus were located on the middle bench part way down the Hurricane Cliffs in section 26.

Herbivory to individual plants would not likely occur, as cattle do not eat the cactus. "Fick" occurs approximately one mile from the nearest water or livestock concentration area.

Suitability and sustainability of the habitat to support the plant would not likely be altered by livestock grazing on the allotment. The cactus has occurred consistently over many years of visits between the inventory and informal checks and shows sustainability.

As best that can be said from trend, monitoring plots and past observances is sustainability and increasing this cactus would not be a problem with this type of population, as it is located in an allotment with good forage quantity and more than a mile from a livestock concentration area.

Ferruginous hawks (*Buteo regalis*) are known to forage over grassland habitat similar to that found on these allotments, though specific sightings have not been recorded for the area. Black-crowned night Heron (*Nysticorax nycticorax hoactli*) and snowy egrets (*Egretta thula brewsteri*) have occasionally been observed using stock tanks in the area, but have not been recorded on the Temple Trail and Hurricane Rim Allotments. A variety of sensitive bat species have been captured on neighboring allotments including Townsend's big-eared (*Corynorhinus townsendii*), spotted bats (*Euderma maculatum*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), and big free-tailed bats (*Nyctinomops macrotis*).

The Proposed Action would have no substantial impact on BLM sensitive and state species of concern.

**Wildlife**

The Proposed Action would have no substantial impacts on big game (mule deer) or the other nongame wildlife found on the allotment. Observation and studies over time have indicated that this area receives only light use by mule deer, primarily as transitional habitat between summer and winter range.

The Proposed Action would have no substantial impacts on Pronghorn antelope. Observations and studies over time have indicated that these two allotments receive light use by pronghorn, which may occupy or transition back and forth between areas. Fences can impact pronghorn antelope. There are currently 20 miles of fences within or along the boundaries of these allotments. According to a recent fence inventory by the Arizona Game and Fish Department, this entire area within the allotment does meet the standards for antelope passable fences. Any maintenance or replacement fences will be built in compliance. However, none are proposed at this time.

**Soils**

Attributes making up the soil resource should remain stable or improved thru implementation of the Proposed Action Alternative and enforcement of the Arizona Standards and Guides process for permitted livestock grazing within the Temple Trail and Hurricane Rim Grazing Allotments. The current grazing rotation allows for seasonal plant rest and vigor. Utilization levels are light to moderate and within that allowable and current vegetative trends are static to upward.

The allotments consist of alluvial fans, low hills, and ridges with outcrops of Moenkopi mudstones and gypsiferous shales and some Kaibab limestone. Several basalt flows and related cinder cones are located in the Temple Trail Allotment.

**Cultural Resources**

There would be no substantial impact to cultural or historical sites as a result of renewing this grazing permit. Cultural resources project file AZ BLM 110-2005-36(Temple Trail) and AZ BLM 110-2005-35(Hurricane Rim) contains documentation of compliance with Section 106 of the National Historic Preservation Act. Great efforts are made to avoid these sites during allotment project implementation. Further, archaeological clearances are completed prior to all project approvals. Previous Class II or III intensive inventories have occurred, with no sites recorded.

**Livestock Grazing**

Under the Proposed Action livestock grazing would continue and the permittee would be allowed to continue in the livestock business.

**Recreation Resources**

Recreation in the area is primarily composed of driving for pleasure, recreational OHV use, horseback riding, hiking, backpacking, camping, hunting, photography and nature study. No impact to recreation is expected.

**Possible Future Range Improvement Projects**

There is a pipeline extension project described below that may occur in the foreseeable future, possibly during the ten-year life of the renewed grazing permit. This EA does not analyze the impacts of this project. NEPA analysis will occur prior to any action being taken.

A pipeline extension project and some pipeline replacement may need to be done. Any new pipelines would occur on state and federal lands. This project was recommended during the Standards and Guides field assessment trip.

**Migratory Birds**

Executive Order 13186 requires BLM and other federal agencies to work with the U.S. Fish and Wildlife Service to improve protection for migratory birds. Implementation of the proposed action is not likely to adversely affect any species of migratory bird known or suspected to occur on the allotments. No take of any such species is anticipated**.**

**Noxious Weeds**

There are two types of noxious weeds inside the allotment boundaries. Scotch Thistle occurs in two small patches and Russian Knapweed occurs near two water sources.

There is presently a small amount of Russian knapweed at Smith Tank and Foremaster Tank (approximately 20 scattered plants within 1 acre). Control efforts in the past 5 years have made significant progress in controlling these species.

A plan is in effect to treat it during the growing season and using periodic checks to monitor and control as long as needed until eradicated.

**Cumulative Impacts**

Cumulative Impacts are tiered to the Arizona Strip RMP (1992), Environmental Consequences pages IV-36 to IV-38, and to chapter 3 of the Vermillion Grazing EIS (1979) which was adopted into the RMP. Unavoidable Adverse Impacts, Relationship between Local Short-term Uses of Man's Environment, Maintenance and Enhancement of Long-term Productivity, and the Irreversible and Irretrievable Commitments of Resources were discussed.

Cumulative impacts occur when additional management facilities are added to those already present. Grazing plans are intended to meet specific objectives to the plan area and involve rangeland improvements that are designed to maintain or improve wildlife habitat, watershed, and overall resource conditions, thus improving ecosystem health.

Past, present, and reasonably foreseeable actions within the analysis area would continue to influence range resources, watershed conditions and trends. The impact of land treatments targeting woody species, voluntary livestock reductions during dry periods and implementation of a grazing system have improved range conditions. The net result has been greater species diversity, improved plant vigor, and increased ground cover from grasses and forbs. No cumulative impacts are predicted from the proposed action.

**Residual Impacts**

Residual Impacts are tiered to the Arizona Strip RMP (1992), Irreversible and Irretrievable Commitments of Resources Chapter 7, page 7-1 of the Vermillion Grazing EIS (1979) which was adopted into the RMP. Though the proposed action doesn't propose any new fences, it does allow for the existence of present fence lines, which do create some restrictions of free passage,

but do not prevent passage of mule deer. Other wildlife using the area are not restricted by existing fences.

There are no residual impacts as a result of the proposed action to the vegetative resource. Future maintenance of existing vegetation treatments would take place regardless of the proposed action and would not affect additional acres beyond that done previously. Residual impacts from maintenance activities would be improved watershed conditions, wildlife habitat, and rangeland resources over time.

**Monitoring**

The monitoring addressed in the proposed action is sufficient to identify changes in vegetation as a result of livestock grazing activities. In addition to those methods described, there are efforts in place to inventory for noxious weed establishment, as well as to monitor treated areas for treatment effectiveness. BLM weed specialist has the lead on monitoring and treating noxious weeds on the Arizona Strip. He has provided training in identification and treatment as well as ways to reduce the spread of weeds to BLM employees and permittees.

**Mitigation**

When noxious weeds are located, various methods are used for their control depending on the size of the infestation and growth stage of the plants. The methods include but are not limited to:

Physical or mechanical
Biological
Chemical

If vegetative monitoring indicates current livestock grazing practices are causing non-attainment of resource objectives, BLM can modify the terms and conditions of a grazing permit (ie. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittee. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect resources.

## V. CONSULTATION AND COORDINATION

This EA was prepared by the Bureau of Land Management (BLM), Arizona Strip Field Office, 345 E. Riverside Drive. St. George, UT 84790. Phone (435) 688-3200. Public involvement for the Temple Trail and Hurricane Rim S&G evaluation began more than four years ago. The assessment was conducted by an interdisciplinary assessment team (IAT) of resource specialists from the BLM. The IAT was assisted by the Rangeland Resources Team (RRT) appointed by the Arizona Resource Advisory Council. A draft evaluation was sent out for public review and comment to Individuals, Groups and Agencies. Comments from Individuals, Groups and Agencies were incorporated in to the Final Temple Trail and Hurricane Rim S&G evaluation

report. This EA reflects those comments.

**Interdisciplinary Assessment Team (IAT):**
Linda Price.....Project Coordinator
Kevin Schoppmann....Range/Grazing
John Herron.....Archaeologist
Robert Smith....Soils/Watershed
Larry Gearhart.....Wilderness/Recreation
Michael Herder.....Wildlife Biologist

**Internal Reviewers:**
Gloria Benson, Native American Coordinator
Tom Folks, Recreation
Larry Gearhart, Recreation/Visual/Wilderness
Laurie Ford, Lands/Realty/Minerals
Michael Herder, Wildlife Team Leader
John Herron, Cultural
Lee Hughes, Plants/Ecology
Ray Klein, GCPNM Supervisory Law Enforcement
Linda Price, S&G Program Coordinator
Bob Sandberg, Range/Arizona Strip Field Office Manager
Richard Spotts, Planning & Environmental Coordinator
Ron Wadsworth, Supervisory Law Enforcement for Field Office

Reviewed by Planning and Environmental Coordinator (P&EC):

_____ _____
Richard Spotts Date
P&EC

## FINDING OF NO SIGNIFICANT IMPACT

Implementation of the Arizona Standards for Rangeland Health and Guidelines for Grazing Management for the Temple Trail and Hurricane Rim Grazing Allotments Permit Renewal

RE: AZ-EA-110-2005-0017

The Environmental Assessment AZ-110-2005-0017, hereby incorporated by reference, analyzed a livestock grazing permit renewal action conducted under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs) where an intensive allotments evaluation was conducted with public and other agency involvement throughout the process. Analysis of existing study data indicates that overall Ecological Site Condition trends are static or up and pace frequency trends are static or improving on the allotment. The resource conditions on the allotments are meeting Standards for Rangeland Health. Issues were analyzed and it was determined that current management is not a factor in preventing attainment of Standards.

The Environmental Assessment reaffirmed the present Allotment Management Plans (AMPs), and determined that the present grazing management system and program would continue to allow improvement to the health of public land resources, such as soil, water, vegetation, wildlife habitat, wildlife and other resource values.

Based on the analysis of Environmental Assessment AZ-110-2005-0017, I have determined that the renewal of the Temple Trail and Hurricane Rim Allotments and Livestock Grazing Permits with current terms and conditions will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared.

**Field Manager**
**Arizona Strip Field Office**

**Date**